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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,213	11/04/2003	Kazutaka Fukuda	FY.50738US0A	5158

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EXAMINER

WALTERS, JOHN DANIEL

ART UNIT PAPER NUMBER

3618

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/701,213	Applicant(s) FUKUDA, KAZUTAKA	
	Examiner John D. Walters	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2006.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-21 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 23 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1 – 21 have been examined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 3 and 6 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashi (JP 09-170039) in view of Fukuda (JP 10-188894). Takashi discloses a cooling belt chamber of vehicle for off road travel comprising:

- a frame defining an engine compartment (Fig. 4, item 2);
- an engine mounted within said compartment (Fig. 4, item 30);
- a crankcase (Fig. 14, item 30a);
- a crankshaft (Fig. 13, item 32);
- a transmission disposed within a transmission chamber (Fig. 13, item 31);
- a drive pulley connected to a transmission primary shaft (Fig. 13, item 52);
- a first end of said primary shaft being supported by said crankshaft (Fig. 14);
- a driven pulley (Fig. 13, item 54);
- a drive belt connecting said drive and said driven pulleys (Fig. 13, item 55);
- an air inlet (Fig. 13, item 51a);
- an air guide, i.e. transmission cover (Fig. 13, item 51)

- said air guide extending along approximately half of the circumference of the drive pulley (Fig. 13).

Takashi does not make use of a support bracket to hold the second end of the primary shaft. Fukuda, however, discloses a crankcase cover comprising:

- a support bracket comprising a plurality of legs (Fig. 6a and 6b);
- wherein an air guide is connected to at least two of said legs (Fig. 6a and 6b);
- wherein a rearward pair of said legs extend from the point of intersection at an obtuse angle from one another (Fig. 6a and 6b);
- wherein said rearward legs extend substantially perpendicular to a force exerted on the primary shaft by the drive belt (Fig. 6a and 6b);
- wherein said legs include a ribbed reinforcing portion extending radially along the length of said legs (Fig. 6b);
- wherein said bracket includes a generally circular reinforcing member having a diameter substantially the same size as a diameter of said drive pulley (Fig. 6a and 6b, item 56);
- wherein said reinforcing member includes a plurality of mounting portions configured to be connected to said crankcase (Fig. 6a and 6b, item 55a);
- wherein said legs further comprise a plurality of flanges comprising a plurality of positioning holes (Fig. 6a and 6b, item 55a);
- a transmission case comprising an inner and outer portion said inner portion being connected to said crankcase and said outer portion being connected to said inner portion (Fig. 5, items 53 and 60);

- wherein said transmission case is made of a resin-based material (paragraph 28).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to combine the support bracket of Fukuda with the cooling belt chamber of Takashi in order to provide additional support and rigidity over said pulley location.

Claims 4, 5, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashi (JP 09-170039) in view of Fukuda (JP 10-188894) as applied to claims 1 – 3 and 6 – 19 above, and further in view of Takayama (6,267,700). Takashi in view of Fukuda does not disclose a separate spiral air guide. Takayama, however, discloses a cooling system for a vehicle power unit comprising:

- an air guide, i.e. baffle plate, formed into a spiral which increases in distance from said drive pulley from a first end to a second end (Fig. 13, item 48).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to combine the spiral guide of Takayama with the cooling belt chamber of Fukuda in view of Takashi in order to provide increased control of the speed and direction of cooling air.

Response to Arguments

Applicant's arguments filed 23 June 2006 have been fully considered but they are not persuasive.

Applicant asserts that Takashi fails to teach or suggest that the air that enters the transmission chamber is directed "along the drive belt."

As shown in figures 13 and 14, air is introduced into the chamber by inlet 51a and is guided to the exhausts 51 b and 51c via the case 51.

For this reason, the rejections stand.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Eastman et al. (4,697,665) discloses an air cooled transmission;
- Takahashi et al. (4,712,629) discloses an engine and drive belt cooling system;
- Pestotnik (6,128,784) discloses an all-terrain vehicle drive train;
- Ohyama et al (2001/0029215) discloses a belt type transmission.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John D. Walters whose telephone number is (571) 272-8269. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John D. Walters
Examiner
Art Unit 3618

JDW



CHRISTOPHER P. ELLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600



DRIVE BELT COOLING STRUCTURE FOR ENGINE
Fukuda
Appl. No.: 10/701,213 Atty Docket: FY.50738US0A
REPLACEMENT SHEET

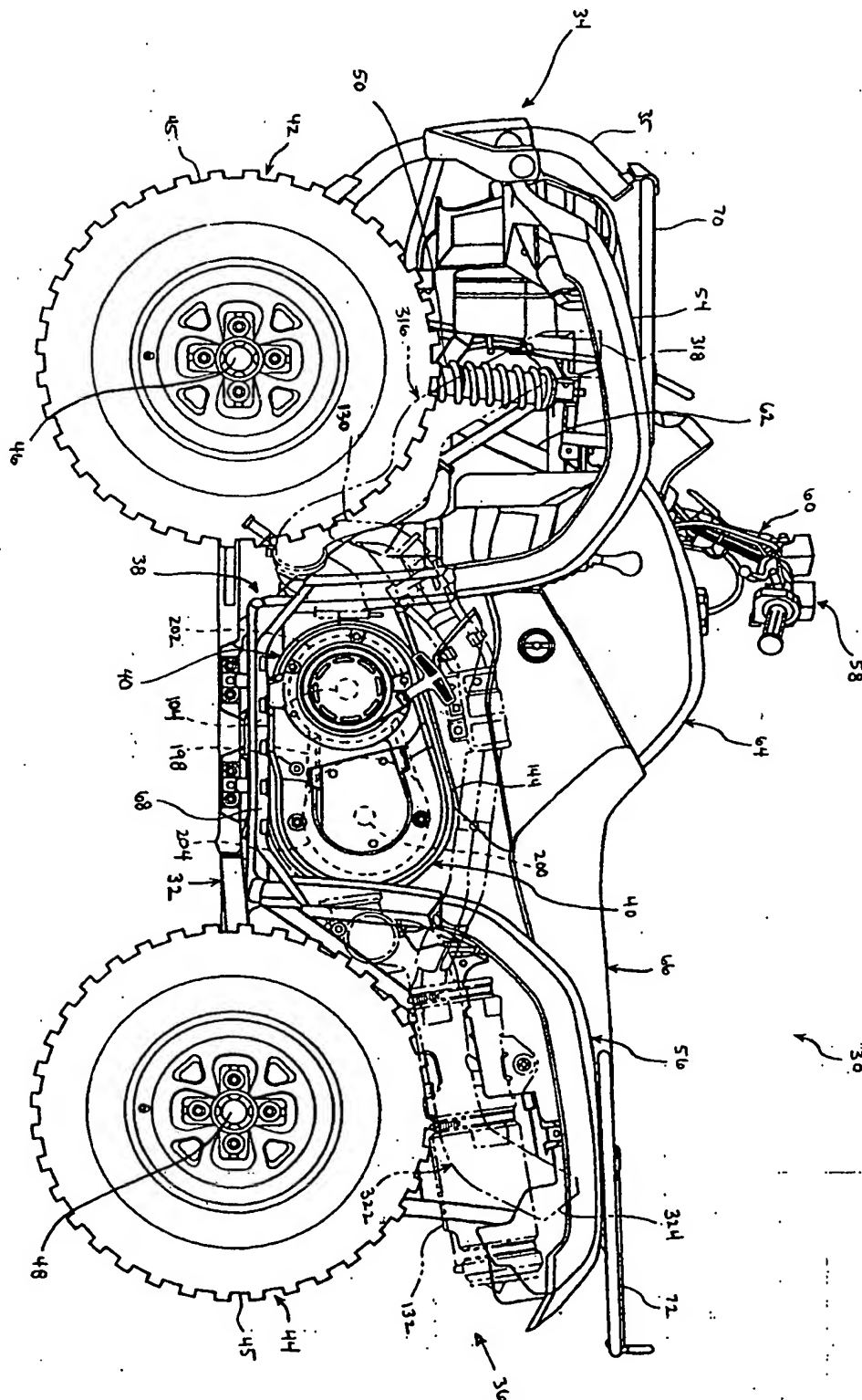


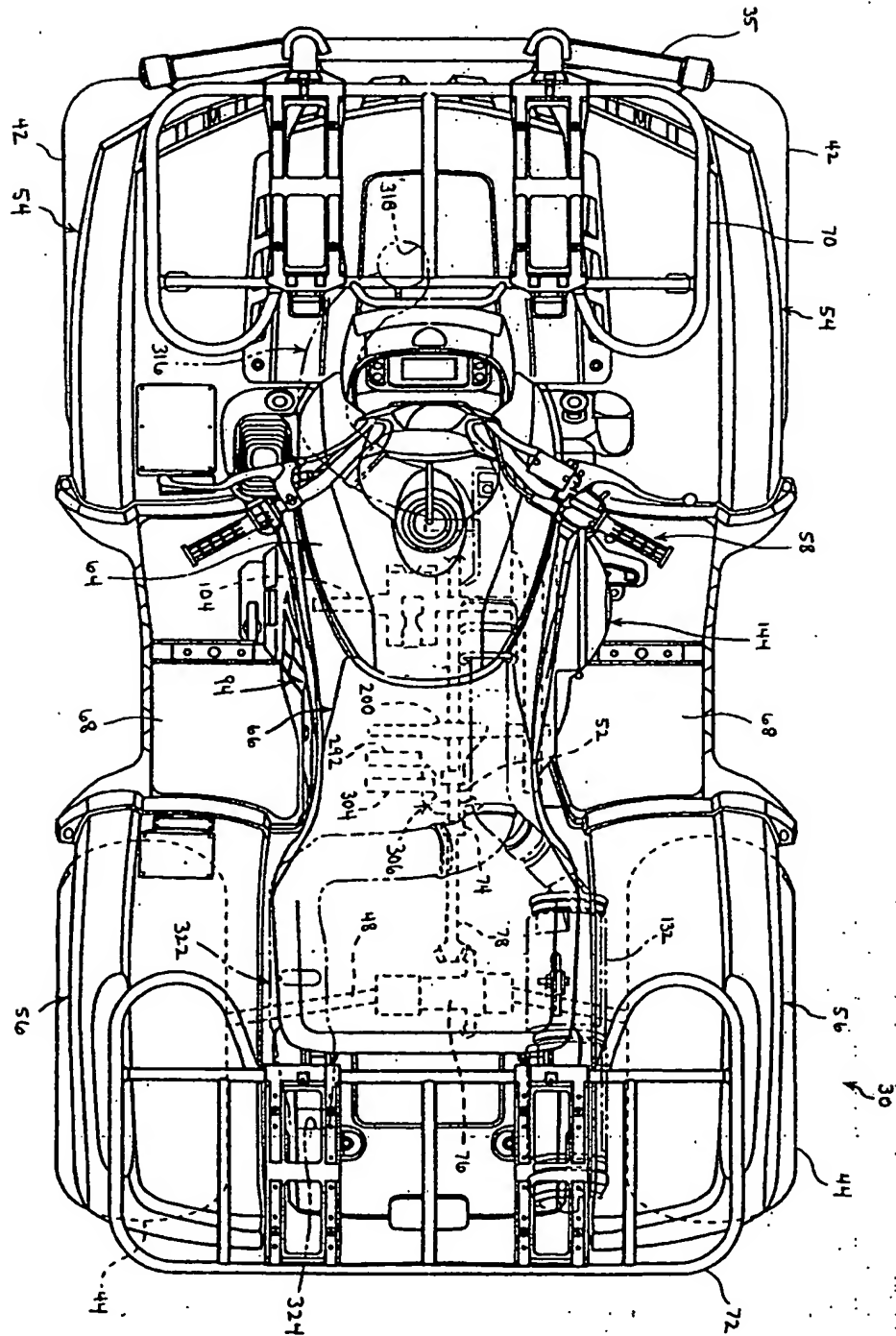
FIG. 1

Revised for
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Fukuda

REPLACEMENT SHEET

FIG. 2



*Revised for
 Entry
 in 30 Aug 06*

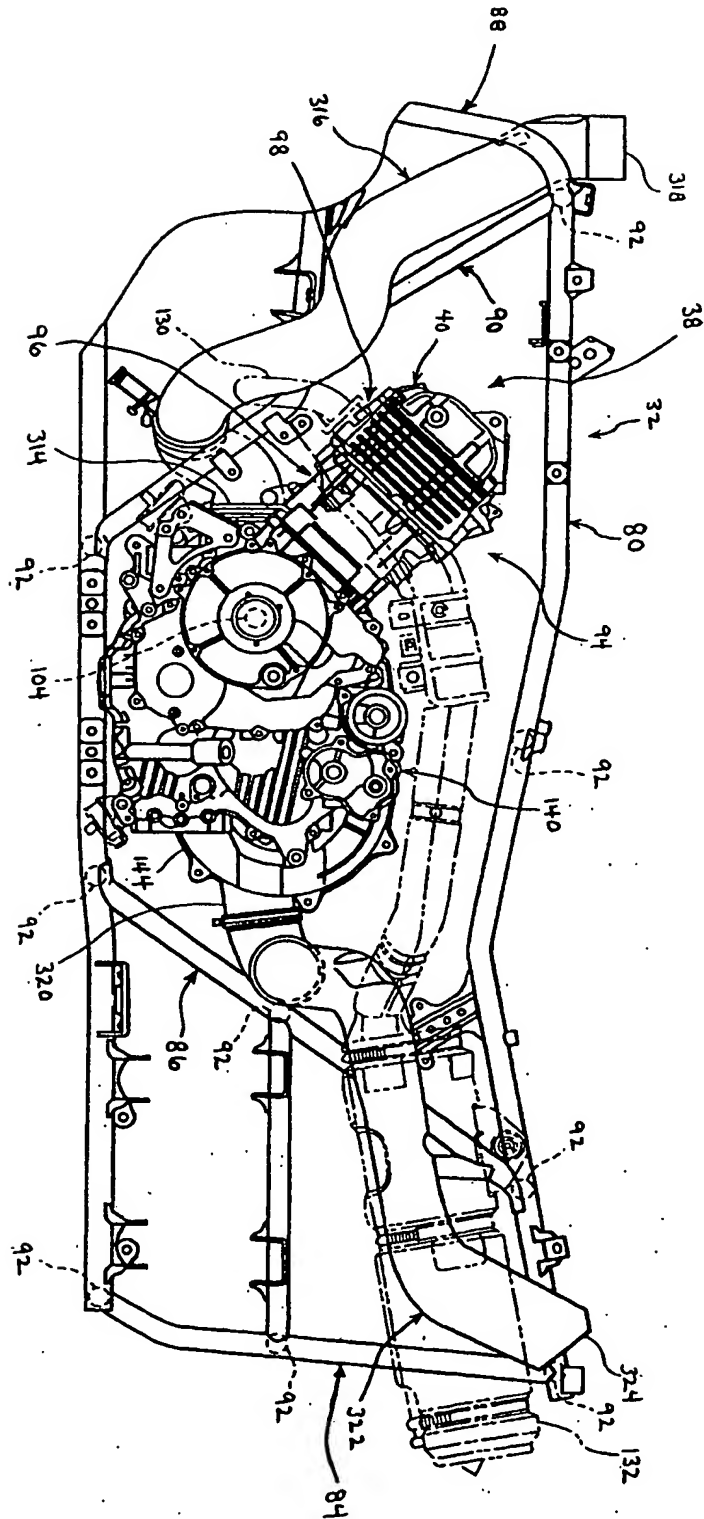


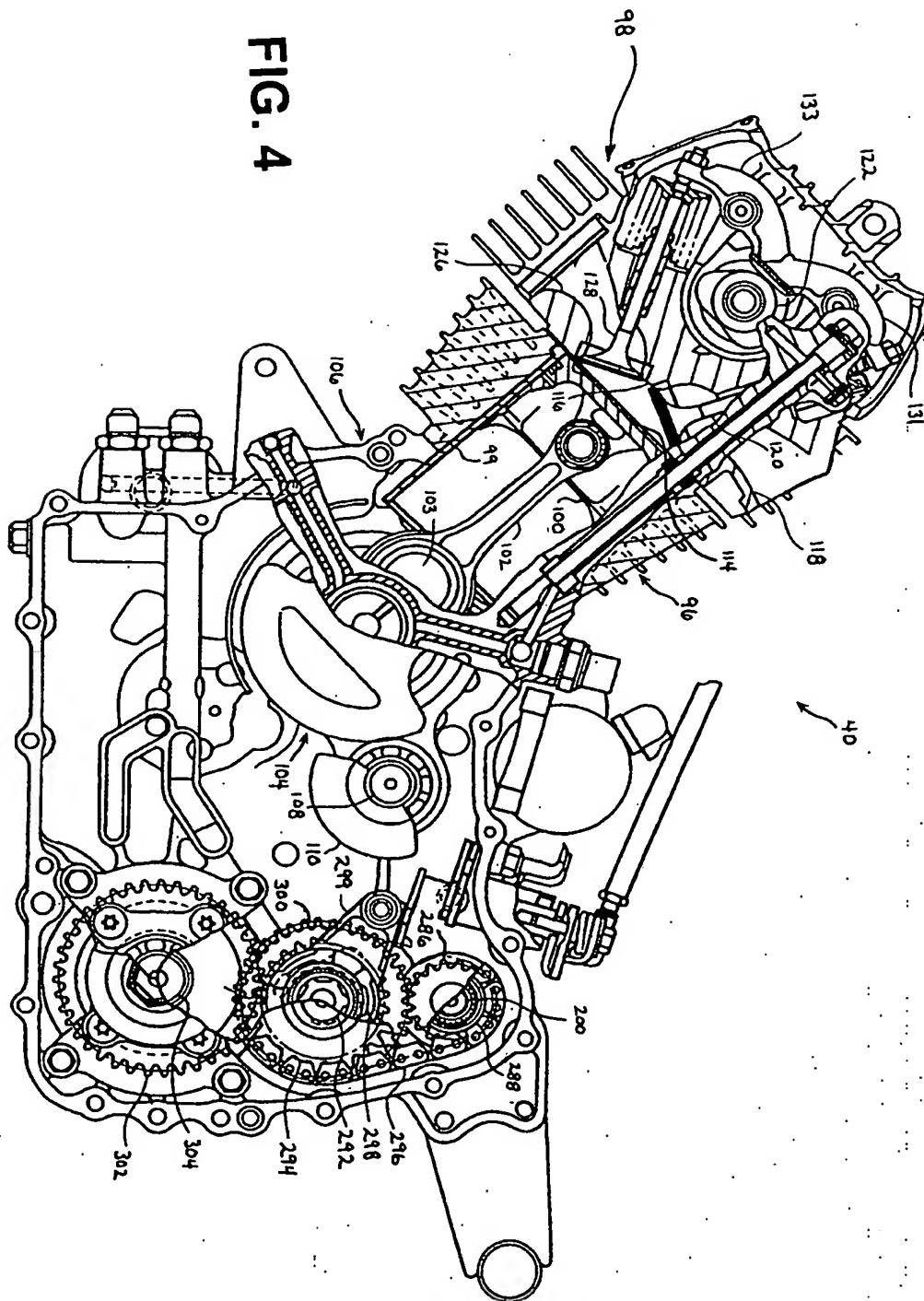
FIG. 3

Fukuda

REPLACEMENT SHEET

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Jul 30 Aug 06

FIG. 4

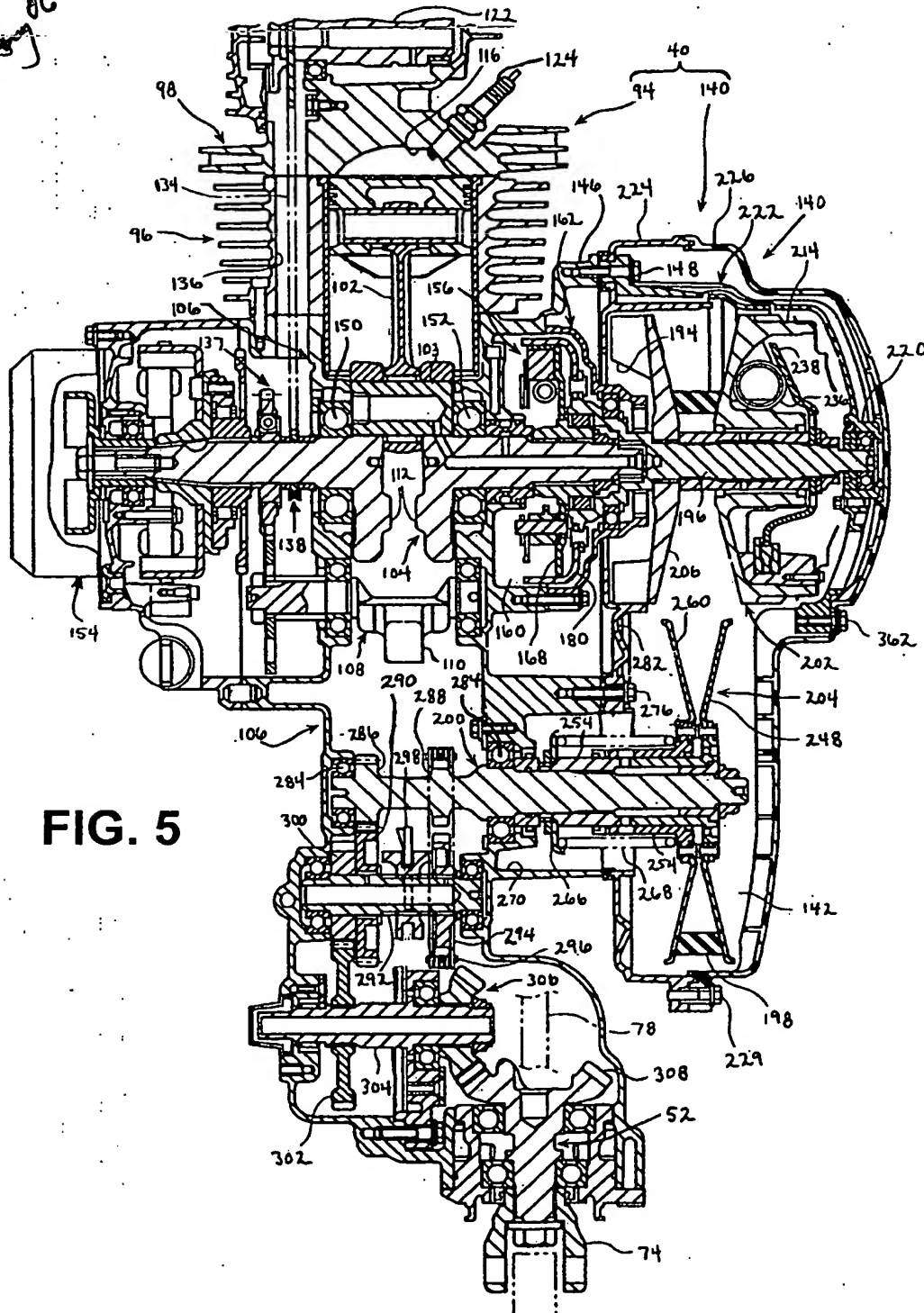


DRIVE BELT COOLING STRUCTURE FOR ENGINE

Fukuda

Appl. No.: 10/701,213 Atty Docket: FY.50738US0A.
REPLACEMENT SHEET

Revised for
Entry.
JW 30 Aug 06



Revised for
Entry.
w/ 30 Aug 86

DRIVE BELT COOLING STRUCTURE FOR ENGINE
Fukuda
Appl. No.: 10/701,213 Atty Docket: FY.50738US0A
REPLACEMENT SHEET

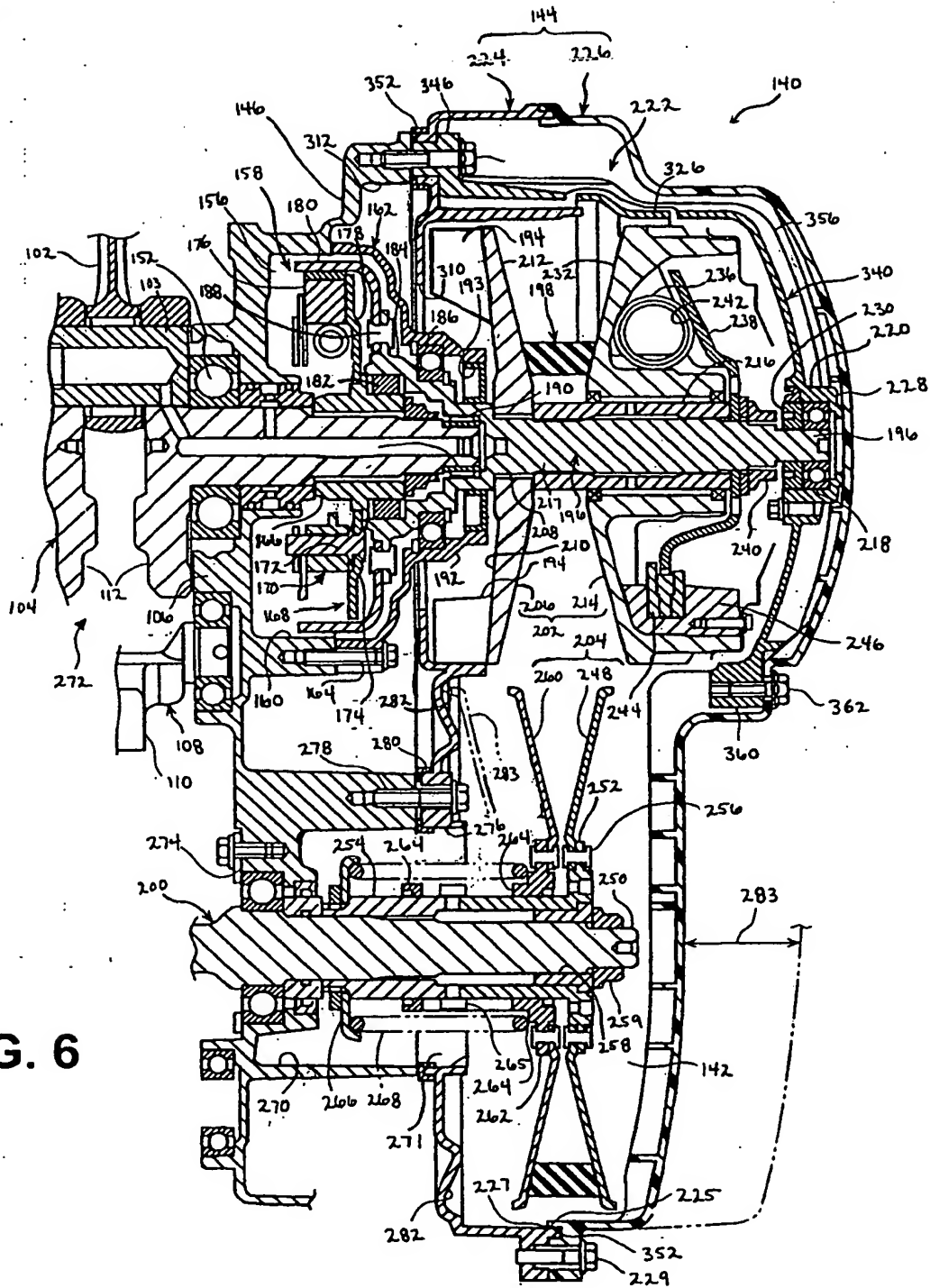


FIG. 6

Fukuda

REPLACEMENT SHEET

FIG. 7

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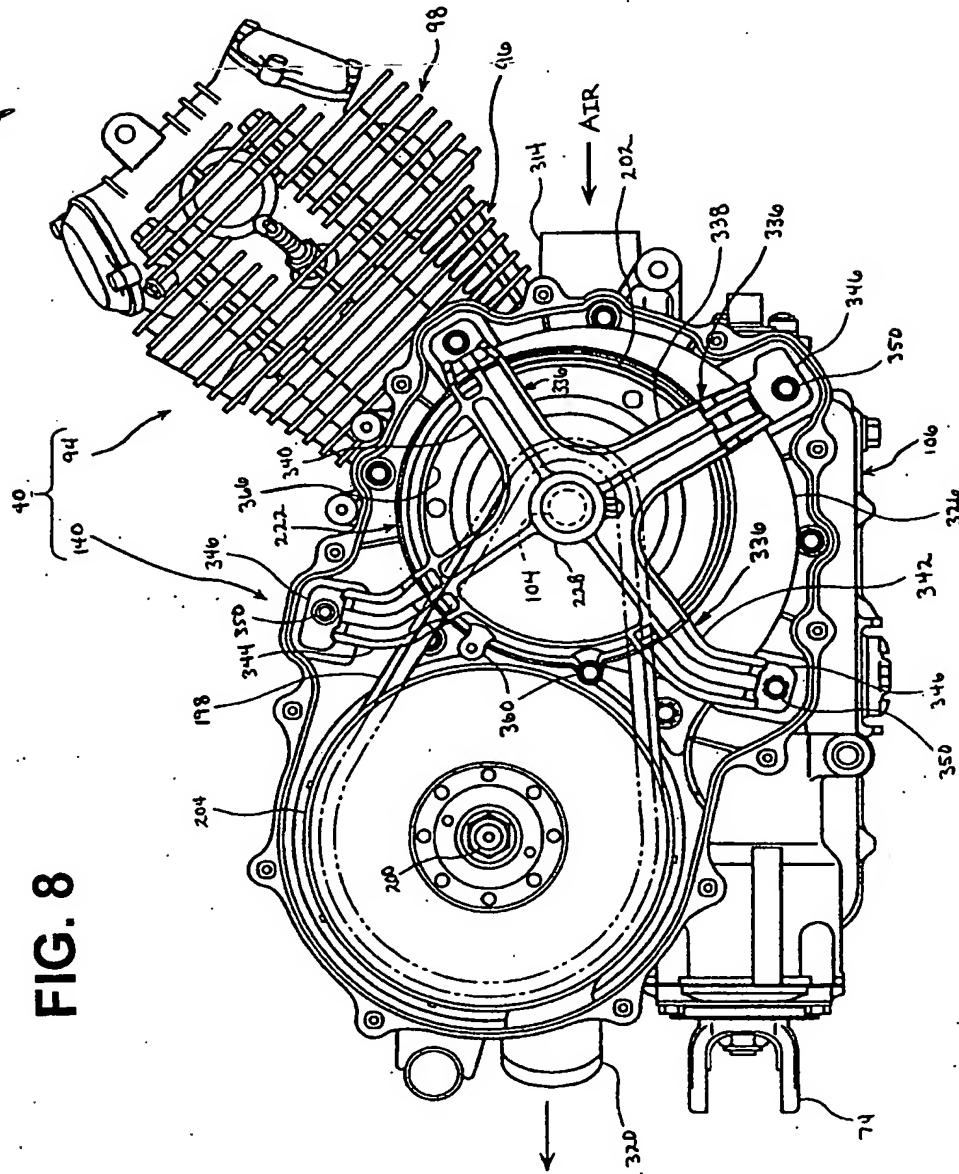


FIG. 8

*Revised for
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 in 30 Aug 06*

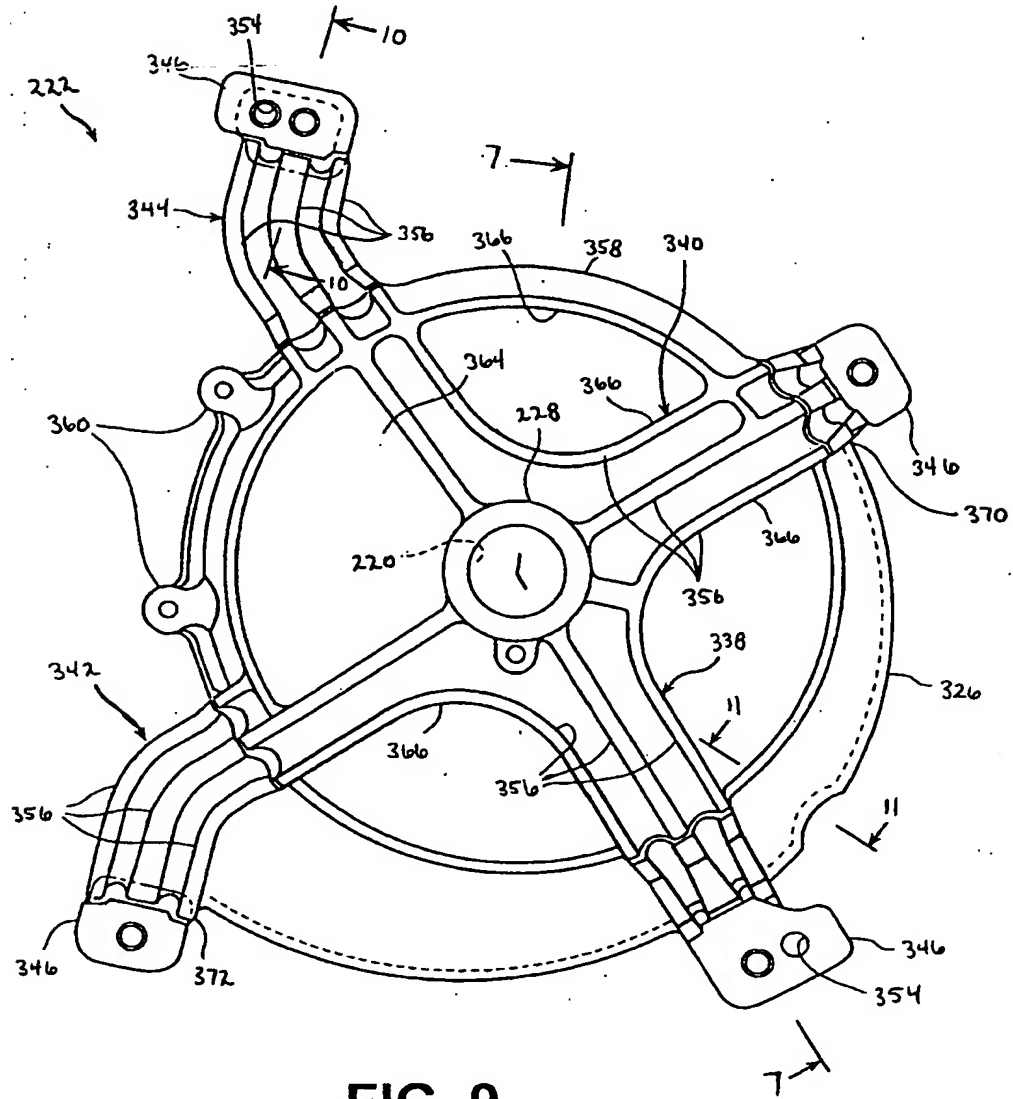


FIG. 9

Revised for
Entry.
JW 30 Aug 86

FIG. 10

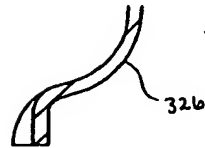
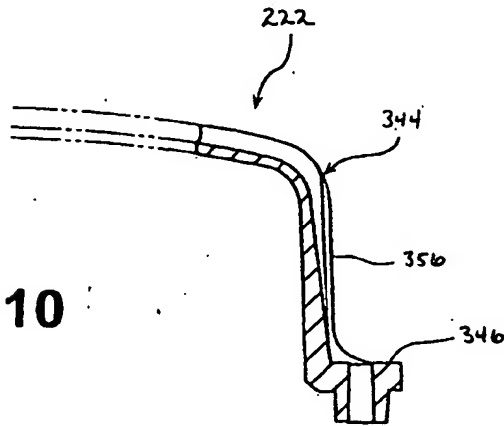


FIG. 11